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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/758,775	01/11/2001	Jignesh V. Gandhi	72880/04796	1726

23380 7590 04/30/2003

ARTER & HADDEN, LLP
1100 HUNTINGTON BUILDING
925 EUCLID AVENUE
CLEVELAND, OH 44115-1475

EXAMINER

AKKAPEDDI, PRASAD R

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 04/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/758,775

Applicant(s)

GANDHI ET AL.

Examiner

Prasad R Akkapeddi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 8-21 and 35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 22-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 January 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of species A, claims 1-7 and 22-34 in Paper No.10 is acknowledged.

Information Disclosure Statement

2. The information disclosure statement filed 06/04/2001 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Drawings

3. The drawings filed on 01/11/2001 are acceptable subject to correction of the informalities indicated on the attached "Notice of Draftsperson's Patent Drawing Review," PTO-948. In order to avoid abandonment of this application, correction is required in reply to the Office action. The correction will not be held in abeyance.

Double Patenting

4. Claims 1-7 are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 22-28. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 1 recites the limitation "said retarder(s)". There is insufficient antecedent basis for this (plural) limitation in the claim.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-7 and 22-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (Anderson) (US 2002/0063818) in view of Abileah (U.S. Patent No. 6,359,671).

a. As to claims 1 and 22: Anderson discloses a high contrast reflective light valve, having a liquid crystal cell, a circular polarizer (13) consisting of a linear polarizer (page 3, paragraph 0034), an analyzer (16) consisting of a circular polarizer having a combination of a linear polarizer and a retarder (1/4 wavelength plate). The light incident to the light valve is off-axis to the LC cell (14) (Fig. 2). The retarders alters the polarization and makes the light circularly polarized thus decreasing the ellipticity. Anderson does not explicitly disclose that the liquid

crystal cell is a twisted nematic type and also does not disclose a color filter. Abileah on the other hand, in disclosing a high contrast liquid crystal device, discloses a twisted nematic liquid crystal layer (210) and a color filter (RGB, col. 12, line 37). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the specific configuration disclosed by Abileah to the device of Anderson to obtain wider viewing angles, both horizontal and vertical having substantially reduced yellow effect.

b. As to claim 2-7 and 23-28: Anderson discloses a liquid crystal on silicon LC cell (14), (page 4, paragraph 0039), the light incident to the light valve at 15 degrees (page 4, paragraph 0037) and Anderson discloses other ranges of degrees for the incident angle can also be used. Abileah discloses the twist angles of the LC cell (page 16) and that the polarizer (215) is perpendicular to the rear polarizer (205). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the specific configuration disclosed by Abileah to the device of Anderson to obtain wider viewing angles, both horizontal and vertical having substantially reduced yellow effect.

As to claims 29-34: Although Anderson discloses quarter wave plates (retarders) plates, Anderson does not explicitly go into the retardation values and the retardation angles for these plates. Abileah on the other hand, discloses the various retardation values and the angles for these plates at various wavelength regions (col. 6, lines 15-65). Note that the range for the retardation value and the

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angles as disclosed by Abileah overlaps the range of 280 to 550 nanometers and 87.5 to 90.3 degrees respectfully (asserted in claims 29-34). Therefore, the range in claims 29-34 would have at least been obvious. See In re Malagari, 499 F.2d 197, 182 USPQ 549 (CCPA 1974).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the Abileah device with the retardation values ranging from 280 to 550 nanometers, retardation angles ranging from 87.5 to 90.3 degrees at various bands of light to enhance the wide viewing angles of the display. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the specific configuration disclosed by Abileah to the device of Anderson to obtain wider viewing angles, both horizontal and vertical having substantially reduced yellow effect.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prasad R Akkapeddi whose telephone number is 703-305-4767. The examiner can normally be reached on 7:00AM to 5:30PM M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H Kim can be reached on 703-305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0530.

PRA

April 22, 2003